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Economical Printed Circuit Front Panel for Computer Use

The conventional techniques used to prepare printed circuit (PC) boards have been applied for use with a ground computer test trap to provide an alternate method for producing panel symbology. PC materials and processing are more economical and time saving than standard front panel fabrication. Formerly, an engraved aluminum front panel for the computer test trap would be required to reflect logic symbology of the circuit cards contained in the equipment. The aluminum panel houses the required cable connectors, lamps, and switches; component, pin or connection designations are placed on the rear of the panel. Among the numerous disadvantages, a master template would have to be fabricated for the complete panel, or master templates for each logic symbol would have to be made. These symbols would be set or machined by hand, and an error at any time in the process could result in a ruined panel.

This complicated and expensive process can be eliminated by the fabrication of a PC board. A general layout sketch and overall dimensions are submitted to the PC facility which produces the master tape drawing. Details are verified, and required changes and subsequent revisions can be made easily. A negative is produced from the tape master and the PC

material is photo-etched; the panel is completed using standard PC processing methods. The unit can be either solder or gold plated. The type of PC board material will depend on the requirements for color, grade and thickness.

Notes:

1. Further details concerning the ground computer test trap and its use with the printed circuit front panel can be found in NASA Tech Brief 70-10561.
2. No further documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Kennedy Space Center
Code AD-PAT
Kennedy Space Center, Florida 32899
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Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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